

IUBMB Enzyme Nomenclature

EC 3.5.4.6

Common name: AMP deaminase

Reaction: AMP + H₂O = IMP + NH₃

For diagram [click here](#).

Other name(s): adenylic acid deaminase; AMP aminase; adenylic deaminase; adenylate deaminase; 5-AMP deaminase; adenosine 5-monophosphate deaminase; 5-adenylate deaminase; adenyl deaminase; 5-adenylic acid deaminase; adenosine monophosphate deaminase; adenylate aminohydrolase; adenylate desaminase; adenosine 5-phosphate aminohydrolase; 5-adenylate deaminase

Systematic name: AMP aminohydrolase

Comments: cf. EC 3.5.4.17 adenosine-phosphate deaminase.

Links to other databases: [BRENDA](#), [EXPASY](#), [GTD](#), [KEGG](#), [ERGO](#), CAS registry number: 9025-10-9

References:

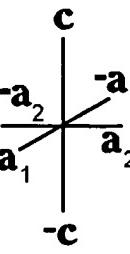
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[EC 3.5.4.6 created 1961]

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SPN

Tetragonal 	<u>Tetragonal - Disphenoidal</u>	(4)	I4 and P4	P = Primitive Lattice. I = Body Centered Lattice. 4 = Rotoinversion Axis. 4,2 = Symmetry Axis (360/n). 4 _{1,2,3} = Screw Axis. a,b,c = Perpendicular Glide Planes. m,n = Oblique Glide Planes.
	<u>Tetragonal - Pyramidal</u>	(4)	I4, I4 ₁ , P4, P4 ₁ , P4 ₂ , and P4 ₃	
	<u>Tetragonal - Dipyramidal</u>	(4/m)	I4/m, I4 ₁ /a, P4/m, P4/n, P4 ₂ /m, and P4 ₂ /n	
	<u>Tetragonal - Scalenohedral</u>	(4 2m)	I42d, I42m, I4c2, I4m2, P421c, P421m, P42c, P42m, P4b2, P4c2, P4m2, and P4n2	
	<u>Tetragonal - Ditetragonal Pyramidal</u>	(4mm)	I4/mcm, I4/mmm, I4 ₁ /acd, I4 ₁ /amd, P4/mbm, P4/mcc, P4/mmm, P4/mnc, P4/nbm, P4/ncc, P4/nmm, P4/nnc, P4 ₂ /mbc, P4 ₂ /mcm, P4 ₂ /mmc, P4 ₂ /mn, P4 ₂ /nbc, P4 ₂ /ncm, P4 ₂ /nmc, and P4 ₂ /nnm	
	<u>Tetragonal - Trapezohedral</u>	(4 2 2)	I4 ₁ 22, I422, P4 ₁ 2 ₁ 2, P4 ₁ 22, P42 ₁ 2, P422, P4 ₂ 2 ₁ 2, P4 ₂ 22, P4 ₃ 2 ₁ 2, and P4 ₃ 22	
	<u>Tetragonal - Ditetragonal Dipyramidal</u>	(4/m 2/m 2/m)	I4 ₁ cd, I4 ₁ md, I4cm, I4mm, P4 ₂ bc, P4 ₂ cm, P4 ₂ mc, P4 ₂ nm, P4bm, P4cc, P4mm, and P4nc	

SPAT



(19)

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(11)

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(12)

EUROPEAN PATENT APPLICATION

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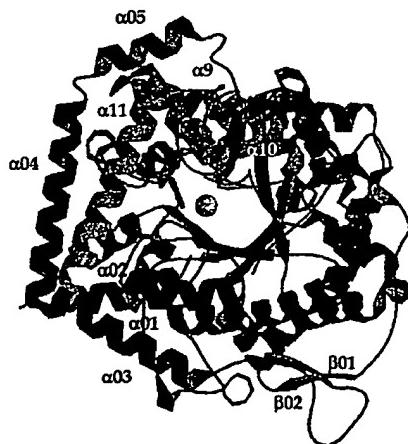
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(54) Adenosine monophosphate deaminase crystal structure

(57) A 2.2 Å crystal structure of rabbit AMP deaminase, an integral enzyme of purine nucleotide interconversion, has been determined, in an unligated state and with an inhibitor bound. The present invention further discloses the use of x-ray crystallographic data for identification and construction of possible therapeutic compounds in the treatment of various disease conditions. The sequence of rabbit AMP deaminase is also disclosed.

Figure 1



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European Patent
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PARTIAL EUROPEAN SEARCH REPORT

Application Number

which under Rule 45 of the European Patent Convention EP 01 30 9996
shall be considered, for the purposes of subsequent
proceedings, as the European search report

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim			
D, X	SMILEY K.L., BERRY A.J., AND SUELTER C.H.: "An improved purification, crystallization, and some properties of rabbit muscle 5'-adenylic acid deaminase" THE JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 242, no. 10, 25 May 1967 (1967-05-25), pages 2502-2506, XP001064797 * the whole document * ---	22	G06F17/00 C12N9/78		
X	DATABASE GENBANK 'Online! NCBI; 31 October 2000 (2000-10-31) "Homo sapiens adenosine monophosphate deaminase 1 (AMPD1), mRNA" Database accession no. NM_000036 XP002198763 * abstract * ---	25, 36			
D, A	WO 94 18200 A (GENSIA INC) 18 August 1994 (1994-08-18) * the whole document * -- -- --	25-29	TECHNICAL FIELDS SEARCHED (Int.Cl.7)		
INCOMPLETE SEARCH					
The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC to such an extent that a meaningful search into the state of the art cannot be carried out, or can only be carried out partially, for these claims.					
Claims searched completely:					
Claims searched incompletely:					
Claims not searched:					
Reason for the limitation of the search: see sheet C					
Place of search	Date of completion of the search	Examiner			
MUNICH	24 May 2002	Schwachtgen, J-L			
CATEGORY OF CITED DOCUMENTS					
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document					
T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document					



European Patent
Office

INCOMPLETE SEARCH
SHEET C

Application Number

EP 01 30 9996

Claim(s) not searched:

30-33

Reason for the limitation of the search:

Claims 30-33 are directed to compounds obtained by a rational drug design screening method. However, no such compounds are defined in the application. No meaningful search can be carried out for such reach-through claims because their scope is purely speculative and open-ended, contrary to the requirements of Articles 84 and 83 EPC.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 01 30 9996

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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24-05-2002

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